

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 61-183986

(43)Date of publication of application : 16.08.1986

(51)Int.Cl.

H01S 3/18  
H01L 33/00

(21)Application number : 60-022927

(71)Applicant : TOSHIBA CORP

(22)Date of filing : 08.02.1985

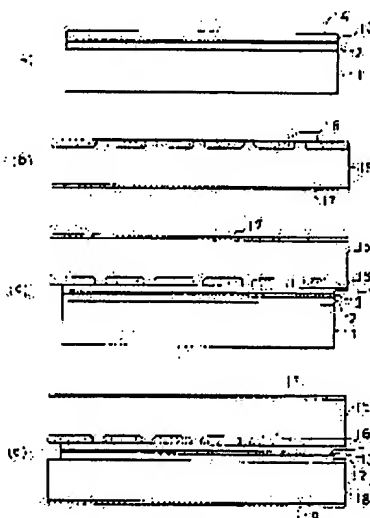
(72)Inventor : NAGASAKA HIROKO  
MOGI NAOTO  
SHIMADA NAOHIRO  
KOMATSUBARA TADASHI  
NAKAMURA MASARU

## (54) MANUFACTURE OF SEMICONDUCTOR LIGHT EMITTING DEVICE

## (57)Abstract:

PURPOSE: To obtain the title device of high output and high reliability which is easily produced, by a method wherein the first semiconductor substrate with a hetero junction structure and the second semiconductor substrate with a structure acting as current stricture or mode control are directly joined to each other.

CONSTITUTION: A clad layer 12, an undoped active layer 13, and a clad layer 14 are successively grown above an N-GaAs substrate 11, thus forming a double hetero junction structure (first structure). Next, the surface of the clad layer 14 is polished into mirror. On the other hand, a P-SiC substrate 15 is provided with a metal mask in stripe form, and a high-resistant layer 16 is formed by front implantation, thus forming the second structure. The surface of the sub strate 15 is polished into mirror. The mirror-polished surfaces of the substrates 11, 15 are made opposed, brought into close contact, and adhered by heat treat ment. Next, the substrate 11 is removed, and the exposed surface of the clad layer 12 is polished into mirror; then, an N-SiC substrate (third semiconductor) 18 is adhered. A semiconductor laser chip is prepared by cutting this element for each stripe.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

BEST AVAILABLE COPY